

## REMARKS

By this Amendment, numerous changes have been made to the claims to address the objections and rejections set forth in the Office Action. In addition, a new Abstract has been provided, which does not exceed the 150 word limit.

With specific reference to the claim amendments, the non-elected claims, claims 37-52 and 55, are hereby cancelled without prejudice to filing a divisional application based thereon.

The claims have also been amended to correct the informalities noted therein and to overcome the rejections under 35 U.S.C. 112, second paragraph. For example, claims 5, 17 and 29 now refer to the diameter of the beam(s) rather than the source and they also indicate that the diameter is taken at the focal region. Claim 10 has been cancelled and claims 12, 34 and 36 have been revised to better define the glasses used. Claim 25 has been revised to indicate that the two beams are combined at the focal regions thereof to create a single focal region. Further, in claims 5, 17 and 29, the units of measurement have been changed to "micrometers" to avoid any confusion.

In the Office Action, it is noted that claims 56 and 57 contain allowable subject matter. Accordingly, these claims have been rewritten as new independent claims 59 and 60, respectively.

With reference to the prior art rejections, claims 1-4, 6, 8, 9, 11 and 12 stand rejected under 35 U.S.C. 102(b) as being anticipated by US 2001/0021293 to Kouta. The remaining claims stand rejected under 35 U.S.C. 103 as being unpatentable over Kouta in view of a number of other references. Applicants respectfully submit that all of these rejections are traversed in view of the foregoing reasons.

It should first be noted that the claimed method should not be seen as operating on an existing waveguide device to modify such a device, but as actually creating a new waveguiding device. At first, this may seem to be a subtle distinction but it is actually quite significant. All of

the references relied upon in the rejections, and in particular the primary citation of Kouta, teach the modification of an existing waveguide, illustrated in Kouta as including a plurality of fiber cores 56 within a slab-like cladding material 11. The waveguide already exists and is modified by the movement of the laser beam focal region along the length of the core. The present invention, on the other hand, starts with a standard elongated optical fiber, typically having a cylindrical core within an annular cladding, and creates a zone of altered refractive index characteristics of the optical fiber to thereby create a new waveguiding device, determined by the type of modifications effected to the fiber. The method of the present invention can result in new optical fiber taps, polarizers, etc. which are much easier to manufacture than in the past and which will be considerably less expensive than those that might be provided by Kouta or the other references of record.

In view of the foregoing, all of the independent claims, as appropriate, have been revised to emphasize that the method of the invention involves the creation of "*an optical waveguiding device from an elongated generally annular optical fiber made of glass material and having at least one core and at least one cladding*". The methods or devices in the references of record do not create such waveguiding devices, and they do not operate on simple, commercially available optical fibers when practicing their methods. The prior art methods all pertain to the modification of existing waveguiding devices, not to the creation of new waveguiding devices from simple optical fibers. Applicants therefore respectfully submit that the prior art references, whether taken singly or in combination, do not disclose or suggest this fundamental concept of creating new waveguides from existing commercially available optical fibers.

For the same reasons, the dependent claims, which bring in specific features relating to the claimed method, are also believed to be patentable over the references of record.

In view of the foregoing, Applicants respectfully submit that all of the claims are now allowable over the prior art of record and that the application is now in condition for allowance. Accordingly, favorable reconsideration of the application is respectfully requested.

Respectfully submitted,

By: William A. Blake  
William A. Blake  
Reg. No. 30,548

JONES, TULLAR & COOPER, P.C.  
P.O. Box 2266, Eads Station  
Arlington, VA. 22202  
(703) 415-1500  
Dated: June 22, 2005